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| 10/678,096 | 10/06/2003 | Penny Jeanette Peachey-Kountz | 01240131CA | 4422 |

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| EXAMINER | |
|---|---|
| ROBERTSON, DAVID | |
| **ART UNIT** | **PAPER NUMBER** |
| 3623 | |

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | |
|---|---|---|
| ***Office Action Summary*** | **Application No.**<br>10/678,096 | **Applicant(s)**<br>PEACHEY-KOUNTZ ET AL. |
| | **Examiner**<br>Dave Robertson | **Art Unit**<br>3623 |

***-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --***

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *06 October 2003*.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-18* is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-18* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a)☐ All b)☐ Some * c)☐ None of:
  1.☐ Certified copies of the priority documents have been received.
  2.☐ Certified copies of the priority documents have been received in Application No. _____.
  3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date *10/6/03*.
4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

1. Examining claims 1-18.

### *Priority*

Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 120, 121, or 365(c) is acknowledged. This application claims benefit of the prior-filed nonprovisional application no. 09/225130, now abandoned after Board of Patent Appeals decision of September 5, 2003. As stated in the specification, this application is related to co-filed application no. 09/225150, now US Patent No. 6,643,345 (2002), sharing substantial matter in their disclosure and claims, however, they are unrelated by priority.

### *Response to Arguments*

2. Applicant's arguments with respect to claims 1, 7, and 13 over Dangat (US 5,971,585) have been considered but are moot in view of the new ground(s) of rejection. Notwithstanding the new grounds of rejection below, Applicant's Remarks filed with amended claims addressed herein have been considered in the preparation of this action.

### *Drawings*

3. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). (See page 3, line 16, of the Specification for indication of prior art status.) Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the

application. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

## ***Specification***

4. The disclosure is objected to because of the following informalities:

a. Page 1, line 9 and page 20, line 6: Correct reference for the placeholder to co-filed US Patent Application is to application no. 09/225150 (now US Patent No. 6,463,345).

b. Page 22, line 13: Correct reference is to step 128 [step 108] of Figure 6. It is apparent from the figure and discussion that step 122 continues to step 128 and that reference to step 108 is a misprint.

Appropriate correction is required.

## ***Double Patenting***

5. The basis for double patenting rejection is as follows:

> The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re*

> *Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).
>
> A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.
>
> Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1, 7 and 13 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 9, and 16, respectively, of U.S. Patent No. 6,463,345. Although the conflicting claims are not identical, they are not patentably distinct from each other.

Claim 1

Claim 1 of the patent recites verbatim elements a) and d) of claim 1 of the application; however, the patent claim does not specifically recite element c) "a supply configurator receiving manufacturing and planning data," and element b) of the patent recites all of element b) of the application except "said rules and priorities including assignment of customers to a plurality of forecast groups."

As to the missing element, the patent claim recites "means for mapping currently available supply against demand," i.e. a "supply configurator."

As to the "assignment of rules and priorities including assignment of customers to a plurality of forecast groups," claim 1 (of the patent) recites "wherein the demand configurator determines how supply is grouped for a plurality of customers in a plurality of forecast groups." To determine such supply grouping by forecast group is to imply that customers had been assigned a forecast group. By definition, in the (substantially identical) specification of the patent and application, a forecast group is formed by customer rules and priorities.

Because the "means for mapping.." is a supply configurator, and because forecast groups must be first formed before "determining how supply is grouped", it would have been obvious to one of ordinary skill in the art at the time of the invention that claim 1 of the patent and claim 1 of the application are not patentably distinct.

Claim 7

Claim 9 of the patent recites verbatim elements a), d), and e) of claim 7 of the application (element c) and d) of the patent to d) and e) of the application, respectively), however, the patent claim does not specifically recite element c) "receiving manufacturing and planning data from a planning source," and element b) of the patent recites all of element b) of the application except "said rules and priorities including assignment of customers to a plurality of forecast groups."

As to the missing element, the patent claim recites in element c) "providing material supply information responsive to manufacturing data from a planning source," i.e. element c) of the patent combines elements c) and d) of the application.

As to the "assignment of rules and priorities including assignment of customers to a plurality of forecast groups," claim 1 (of the patent) recites "wherein the demand configurator determines how supply is grouped for a plurality of customers in a plurality of forecast groups." To determine such supply grouping by forecast group is to imply that customers had been assigned a forecast group. By definition, in the (substantially identical) specification of the patent and application, a forecast group is formed by customer rules and priorities.

Because the "receiving manufacturing and planning data" is equivalently stated by the patent, albeit in a combined element, and because forecast groups must be first formed before "determining how supply is grouped", it would have been obvious to one of ordinary skill in the art at the time of the invention that claim 7 of the patent and claim 9 of the application are not patentably distinct.

Claim 13

Claim 16 of the patent recites verbatim elements a), d), and e) of claim 13 of the application (element c) and d) of the patent to d) and e) of the application, respectively), however, the patent claim does not specifically recite element c) "a third computer code for receiving manufacturing and planning data," and element b) of the patent recites all of element b) of the application except "said rules and priorities including assignment of customers to a plurality of forecast groups."

As to the missing element, the patent claim recites in element c) " a third computer code for providing material supply information responsive to manufacturing and planning data from a planning source," i.e. element c) of the patent combines elements c) and d) of the application.

As to the "assignment of rules and priorities including assignment of customers to a plurality of forecast groups," claim 1 (of the patent) recites "wherein the demand configurator determines how supply is grouped for a plurality of customers in a plurality of forecast groups." To determine such supply grouping by forecast group is to imply that customers had been assigned a forecast group. By definition, in the (substantially identical) specification of the patent and application, a forecast group is formed by customer rules and priorities.

Because the "third computer program code for receiving manufacturing and planning data" is equivalently stated by the patent, albeit in a combined element, and because forecast groups must be first formed before "determining how supply is grouped", it would have been obvious to one of ordinary skill in the art at the time of the invention that claim 16 of the patent and claim 13 of the application are not patentably distinct.

### *Claim Rejections - 35 USC § 112*

7. Claims 2, 8 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear from the claims read in light of the specification how "the supply configurator.[by deleting] from demand information all build options and all receipts [operates to] create said new supply data." While deleting building options and receipts may be a necessary step to the particular implementation to avoid unwanted artifacts of the process, i.e. "to avoid trigging fresh STARTS" (page 20, line 15), it is not apparent how this contributes to the generalized (broad) system as claimed. For the purposes of examination, this step within the supply configurator is interpreted to mean reducing a multi-level product demand to a single-level bill of

material. Reference to this matter is noted in the specification Figure 5 Step 102 discussed on page 20, lines 16-18. Clarification is requested.

### *Claim Rejections - 35 USC § 102*

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1, 7, and 13 are rejected under 35 U.S.C. 102(e) as anticipated Kennedy et al, US 6,167,380 "System and method for allocating manufactured products to sellers", including the following (hereinafter referred to as Kennedy):

by virtue of incorporation by reference:

| | |
|---|---|
| US 5764543 A | Extensible model network representation system for process planning |
| US 5832532 A | Model-independent and interactive report |
| US 5845258 A | Strategy driven planning system and method of operation |
| US 6188989 B1 | System and method for managing available to promised product |
| US 5943244 A | System for optimizing a network plan and method of operation |

by virtue of at least one common inventor to a common assignee:

| | |
|---|---|
| US 5983194 A | Planning coordination systems for coordinating separate factory planning systems and a method of operation |
| US 6047290 A | Computer implemented planning system and process providing mechanism for grouping and prioritizing consumer objects based on multiple criteria |

US 6963847 B1 System and method for managing ATP data in a distributed supply chain planning environment

Claim 1

The combined teachings of Kennedy disclose a system for planning, managing, accepting and allocating manufactured product demand to sellers and seller groups in an advanced available-to-promise computer-implemented system, including, in relationship to the present invention:

| | |
|---|---|
| a) at least one demand source for inputting demand information; | Kennedy '380, "Sellers" represent demand sources for inputting customer order requests (see '380, Figure 1 Item 50 and seller models from column 4, line 15). Sellers are demand sources. |
| b) a demand configurator receiving demand information from each said at least one demand source and coordinating product requests responsive to said received demand information according to customer request rules and priorities, | Allocation policies ('380 from column 7, line 43) govern allocation rules for customer requests including "member rank policy" (column 8, line 7) setting allocation priorities for group members. The "Seller Model" is a "demand configurator" having the recited function. |
| said rules and priorities including assignment of customers to a plurality of forecast groups; | Allocations to Seller Organizations are governed by group allocation rules with Sellers assigned to Groups according to Organization (Figure 1), Site (see "site models represent organizational units that may have the capacity and materials to produce or *consume* items and each site can place requests for items upon other sites" ('380, column 3, line 65), by Industry and by Geography ('380 Figure 4). The rules (policies) and priorities (rankings) enable sellers |

| | |
|---|---|
| | with higher rank "get their allocations before the allocation goes to the lower rank sellers." ('380, column 4, line 35). |
| c) a supply configurator receiving manufacturing and planning data from a planning source and manipulating said received manufacturing and planning data to create new supply data; | "Site Models" represent organizational units that have the capacity and materials to produce or consume items ('380, column 3, line 65). |
| d) a material resource engine for providing material supply information responsive to said new supply data, said received demand information and according to product supply rules and priorities; | Kennedy in '258, teaches a planning engine for planning strategies in a manufacturing planning environment including rules and priorities governing capacity, material availability, and due date constraints (see '258, from column 3, line 54). |
| and e) a solver for optimizing product availability information responsive to the material supply information and product supply rules and priorities. | Kennedy in '258 describes a Planning Engine for planning a strategy to produce product in a manufacturing environment to optimize product availability in a system for allocation of manufactured product to sellers (see '258 from column 3, line 65, esp. column 4, line 40, "user may define a formula computed from throughput, marginal cost, profit margin, inventory, and such, to indicate optimality. |

In summary, the combined teachings of Kennedy teach a *demand side* available-to-promise system coupled with a *supply-side* planning system that together teaches the broad claims of the present invention.

Claims 7 and 13 recite the computer-implemented method and computer program product of the system recited by claim 1 and are similarly rejected for the reasons given above.

### *Claim Rejections - 35 USC § 103*

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 2-6, 8-12, and 14-18 are rejected under under 35 U.S.C. 103(a) as obvious over Kennedy as applied to claims 1, 7 and 13 above, and further in view of Vollman (Manufacturing planning and control systems, 1997).

Claim 2

Kennedy does not expressly teach "wherein the supply configurator, deletes from said received demand information all build options and all receipts to create said new supply data," however, Kennedy in '194 teaches a planning coordination system that determines a production output plan responsive to "each demand received from a customer sales entity." (see '194, column 3 from line 29). "Planning Coordination" includes tracking "dates of receipt of necessary parts" and "what parts need to be ordered from [which] factory to manufacture the products to be supplied to the customer sales entity." While Kennedy teaches managing receipts and making factory-to-factory parts orders to fulfill product demand, it is not specifically disclosed in Kennedy's manufacturing resource planning step for optimizing product availability for an available-to-promise system, that “build options and receipts are deleted” to “avoid triggering fresh STARTS” according to the present invention (as disclosed for present invention in the Detailed Description, page 20, lines 16-23).

It is old and well known in the art of planning production that product manufacturing involving products with parts and subparts containing build options involves multi-level bills of material (BOMs), where a multi-level BOM for a product becomes a single-level order for parts ordered from another factory. Vollman, for example, teaches how BOMs for product options are managed in a master production scheduling environment, that is, BOM’s are sometimes single-level, exploded, or imploded depending on the need and specific operation in the manufacturing planning process, including the need of parts factories to plan according to the product of their factory even though being a supplier of (sub) parts to another.

In the available-to-promise planning process taught by Kennedy, it would have been obvious to one of ordinary skill in the art at the time of invention that build options were not needed once multi-level BOMs were exploded to single-level BOMs for planning production of parts by associated factories, whether or not the intended result of this was required to “avoid triggering fresh starts.” Doing so would have provided the advantage of a parts supplier factory to focus production planning according to the product produced by that factory.

Claim 3

Kennedy teaches demand grouped for a plurality of customers in a plurality of forecast groups. A "forecast group" by the present invention is a product demand (for a material) ordered by a customer (from a seller) to a customer location (site), the seller having an associated priority (rank). See '380 column 4 from line 5. See also that in '290 Kennedy teaches generalized grouping by generalized multiple criteria (see '290 column 3 from line 25). Thus, Kennedy can form a "forecast group" with at least the specificity of the present invention.

Claim 4

Kennedy teaches mapping supply against actual demand (see '380 column 6 from line 65 "Allocation to sellers" and "Allocation policies").

Claim 5

Kennedy teaches designating supply for demand types actual and forecasted.

Claim 6

Kennedy does not expressly teach designating supply for demand types including all of backorders, firm orders, order move-ins, order move-outs and new requests. Official notice is taken that it is old and well known in the art of inventory management and production planning to designate supply for differing demand types as backorders (unfilled orders), firm orders (actual orders), move-ins and move-outs (existing orders where the delivery dates are being moved out in time or moved to a date soon), and forecasted orders, and that so designated, fulfillment or production planning according to demand types affords suppliers more fair and consistent service to customers and more efficient production planning. Because Kennedy teaches actual and forecasted orders in a production planning and available-to-promise system (inherently creating backorders from future promises), it would have been obvious to one of ordinary skill in the art at the time of the invention to designate supply by the range demand types common to the art. Doing so would have afforded suppliers more fair and consistent service to customers and more efficient production planning.

Claims 8-12 and 14-18 recite the computer-implemented method and computer program product of the system recited by claims 2-6, and are similarly rejected for the reasons given above.

## ***Conclusion***

12. The file wrapper history of the parent to this continuation, US application 09/225130, including arguments made prior to and at appeal of that application before the board and consistently brought forward in this continuation, and as well the file wrapper history of related case 09/225150 (US 6,643,345) in which the disclosure and claims are substantially similar have been thoroughly reviewed. Because of the long pendency of this application and because of differences in opinion as to what was encompassed in terms of the prior art, it is in the interest of the Examiner and, it is believed, Applicant, to proceed according to the established file wrapper history in applying art and in making and responding to arguments and amendments. To this end Examiner makes the following observations and asks Applicant to consider and clarify for Examiner's understanding, if necessary, in responding to this office action:

a. The differences between the prior art Dangat (US 5,971,585) and the present invention appear to be in the use of Dangat's material resource engine, the "Profit BCD" solver, to perform as an available-to-promise solver, dubbed "Profit ATP", by manipulating customer demand (order) information to fit the demand information input needs of Profit BCD. Whereas Profit BCD alone performs to optimize product availability from previously determined manufacturing supply and planning (forecast) data, determining *how (and when)* actual or projected demand can be *produced*, Profit ATP performs to determine *whether (and when)* demand from new customer orders can be *promised*. Profit ATP, in a sense, adds *incremental demand* to the totality of demand data already available to Profit BCD, thus allowing new customer orders to be incorporated into production planning in real-time, or customer-time, i.e. in response to sales inquiries. Because Profit ATP uses the same solver used in material resource planning for actual production planning, the accuracy of promised demand should be consistent with the accuracy of planned production taking into account all production planned for the enterprise for all types of orders.

b. The rules and priorities used by Profit BCD to optimize product availability from manufacturing supply and planning data are *not* wholly distinct nor entirely overlapping (as has been argued both ways) from the rules and priorities used by Profit ATP; rather Profit ATP *extends* the rules and priorities of Profit BCD by at least one set of rules assigning a priority to a customer order according to its forecast group and demand type. In preparing a customer order for input to the

Profit BCD solver, Profit ATP manipulates demand class—a numerical value used by the Profit BCD solver to set the priority of individual demands—according to rules for the customer's forecast group reflecting the importance of satisfying that particular group's demand. In so doing, Profit ATP affords finer control over priorities used in optimizing product availability for both production planning and in order promising.

c. It is the specific and inextricable integration of the supply-side Profit BCD solver with demand-side extensions forming Profit ATP that the utility and potential patentability of the present invention emerges. As addressed in the rejections above, the broad concept of aggregating demand by customer group using rules for customer-group-based demand priority for optimizing product availability by a materials resource planner was known or suggested in the art at the time of the present invention. What is not evident from the art is the specific implementation afforded by Profit ATP using the Profit BCD solver engine in the particular manner proscribed, for example, by claims 1, 9 and 16 of US Patent No. 6,643,345, to the present inventors. However, it is not the foregone conclusion that claims to the present invention cannot be narrowed relative to the patent, provided such claims recite essential elements of the improvements to Dangat and patentability distinct over the prior art.

2. Given the established prosecution history and long pendency of this case, a seasoned response to this office action followed by a formal telephone interview, if

requested by Applicant, may afford faster prosecution and would be welcomed by the Examiner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dave Robertson whose telephone number is 571-272-8220. The examiner can normally be reached on 8:15am to 5:15pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 571-272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Primary Patent Examiner
Art Unit 3623

dcr